

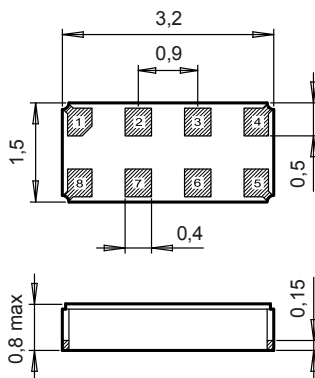
RV-8803-C7

Real-Time Clock Module with I²C-Bus

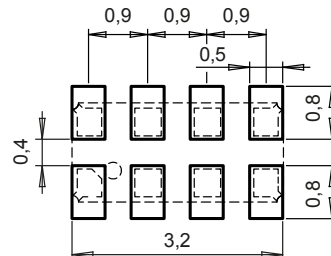


DIMENSIONS

Package:



Recommended Solder Pad:



All dimensions in mm typical

APPLICATIONS

IoT
Metering
Industrial
Automotive
Health Care
Wearables, Portables

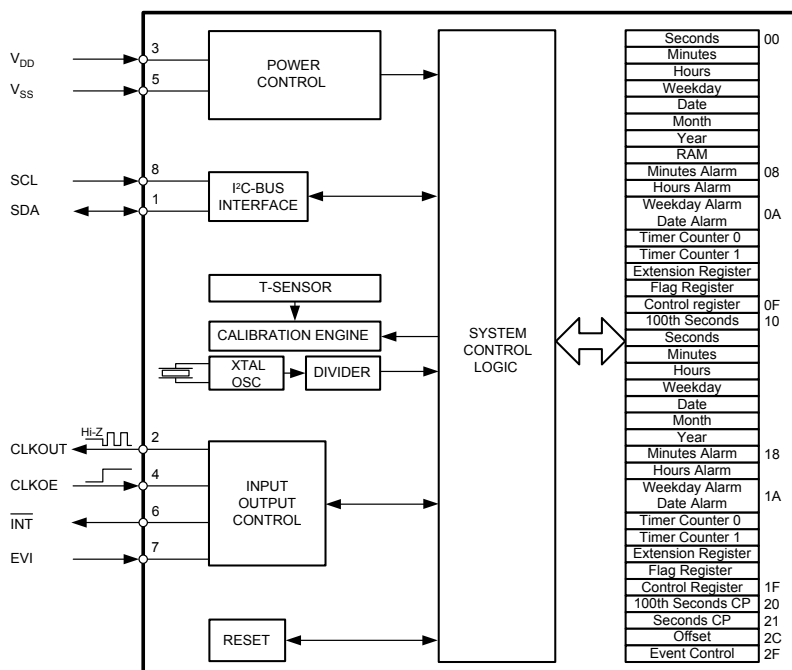
DESCRIPTION

The RV-8803-C7 is a SMT Real-Time Clock Module that incorporates an integrated CMOS circuit together with an XTAL. It operates under vacuum in a hermetically sealed ceramic package with metal lid.

FEATURES

- Low power consumption: 240 nA @ 3 V.
- Wide operating voltage range: 1.5 V to 5.5 V.
- Temperature compensated, high accuracy: ± 3 ppm for -40°C to $+85^{\circ}\text{C}$.
- User programmable offset value.
- Low voltage detection.
- Provides year, month, date, weekday, hours, minutes, seconds and 100th seconds.
- Automatic leap year correction: 2000 to 2099.
- Timer, alarm and external event input with time stamp.
- Clock output frequencies: 32.768 kHz, 1024 Hz, 1 Hz.
- I²C-bus interface: 400 kHz.
- 100% Pb-free, RoHS-compliant.
- Automotive qualification according to AEC-Q200 available.

BLOCK DIAGRAM



ELECTRICAL CHARACTERISTICS AT 25°C

More detailed information can be found in the Application Manual.

	Symbol	Condition	Min.	Typ.	Max	Unit
Supply voltage	V _{DD}	Time keeping	1.5		5.5	V
Supply voltage	V _{DD}	Temp. comp.	1.5		5.5	V
Current consumption Time keeping mode	I _{DDO}	I ² C-bus inactive, V _{DD} = 3 V		240	350	nA
CLKOUT frequency	F _{CLKOUT}	Programmable	32768/1024/1			Hz
Aging first year max.	ΔF/F	@ 25°C	±3			ppm

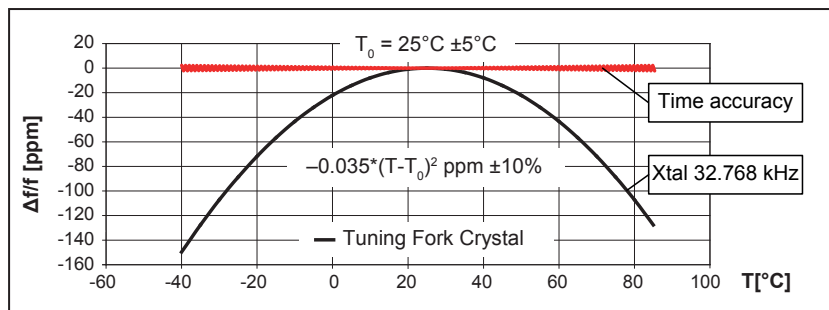
ENVIRONMENTAL CHARACTERISTICS

		Conditions	Max. Dev.
Storage temp. range		-55 to +125°C	
TA Operating temperature range		-40 to +85°C	
Shock resistance	ΔF/F	5000 g, 0.3 ms, ½ sine	±5 ppm
Vibration resistance	ΔF/F	20 g / 10–2000 Hz	±5 ppm

TERMINATIONS AND PROCESSING

Package	Termination	Processing
SON-8	Au flashed pads	IPC/JEDEC J-STD-020C 260°C / 20 - 40 s

FREQUENCY TEMPERATURE CHARACTERISTICS



PIN CONNECTIONS TOP VIEW

Pin	Connection
1	SDA Serial Data
2	CLKOUT Clock Output
3	V _{DD} Power Supply Voltage
4	CLKOE Clock Output Enable
5	V _{SS} Ground
6	INT Interrupt Output
7	EVI Event Input
8	SCL Serial Clock Input

Product Date Code

#8

#5

M723A1

8803

#1

#4

Part Designation

Pin 1 Index

ORDERING INFORMATION

RV - 8803 - C7 TA QC	
RTC module	Qualification
Product type	QC = Commercial Grade (Standard)
	QA = Automotive Grade AEC-Q200
Package size	Temperature range
C7 = 3.2 x 1.5 x 0.8 mm	TA = -40 to +85°C (Standard)
A unique part number will be generated for each product specification, i.e:	
20xxxx-MG01	1'000 pcs (in 12 mm tape on 7" reel)
20xxxx-MG03	3'000 pcs (in 12 mm tape on 7" reel)

All specifications subject to change without notice.



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